



# State of the Satellite Industry Report

June 2009

*Sponsored by the*



*Prepared by  
Futron Corporation*





## Study Overview

- The latest comprehensive satellite industry statistics in SIA's series of annual studies
- Based on year-end 2008 annual statistics from key players representing four satellite industry segments:
  - Satellite Services
  - Satellite Manufacturing
  - Launch Industry
  - Ground Equipment
- Performed by Futron Corporation, the report includes surveys of over 70 SIA members and key companies in the industry, augmented with publicly available data and research to derive industry revenues and statistics



# Satellite Industry Overview

## Satellite Services

- Mobile
  - Mobile Data
  - Mobile Voice
- Fixed
  - Broadband
  - Private Networks
  - Transponder Agreements
- Remote Sensing
- Broadcasting
  - Satellite Television
  - Satellite Radio



## Launch Industry

- Launch Services
- Vehicle Manufacturing

## Ground Equipment

- Network Equipment
  - Gateways
  - Control Stations
  - Very Small Aperture Terminals (VSATs)
- Consumer Equipment
  - Direct Broadcast Satellite (DBS) Dishes
  - Handheld Satellite Phones
  - Digital Audio Radio Service (DARS) Equipment
  - Global Positioning System (GPS) Primary-Use Hardware

## Satellite Manufacturing

- Satellite Manufacturing
- Component and Subsystem Manufacturing



- Satellite Manufacturing data
  - Include commercial manufacturing activity for both commercial and government customers
- Launch Industry data
  - Include services provided by private companies for both commercially-owned and government-owned payloads
  - Do not include government launches, such as Shuttle launches or ISS missions, except in cases where the launch service was provided commercially
- Launch Industry and Satellite Manufacturing revenues are recognized in the year of launch
- Revenue is expressed in real-year U.S. dollars (not adjusted for inflation)

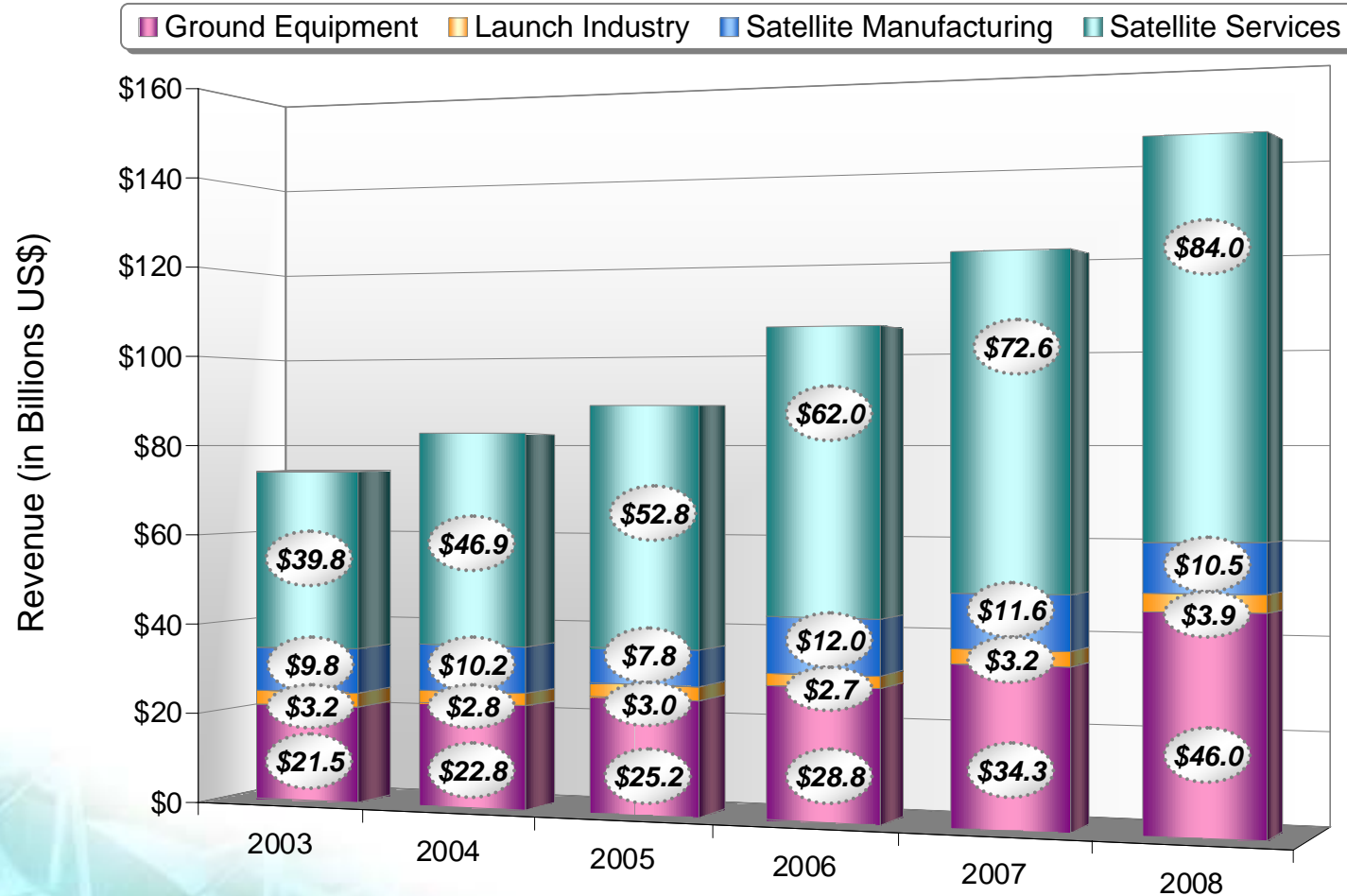


# World Satellite Industry Revenues



*World satellite industry revenues had average annual growth of 14.2% for the period from 2003 to 2008*

# World Revenues By Sector



*Satellite Services showed continued strong growth of 16%, solidifying its role as the driver of this industry, while Ground Equipment revenues surged 34%*



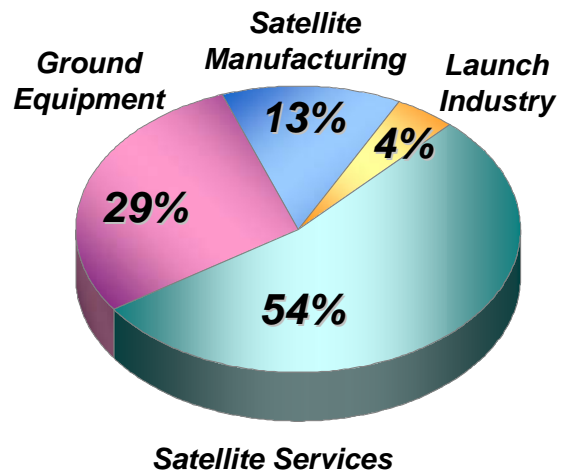
## Top-Level Satellite Industry Findings

- Overall worldwide industry revenue growth was 19% from 2007 to 2008, compared with a 15% increase from 2006 to 2007
- Satellite Services increased by more than 16% from 2007 to 2008, largely due to growth in satellite television revenues
- Satellite Manufacturing revenues declined slightly, reflecting fewer satellites launched
- Launch Industry revenues grew by 20% from 2007 to 2008, fueled by a general increase in launch prices, despite fewer launches
- Ground Equipment revenues grew by 34% in 2008, a significant increase over the 19% growth in 2007

# World Revenues By Sector

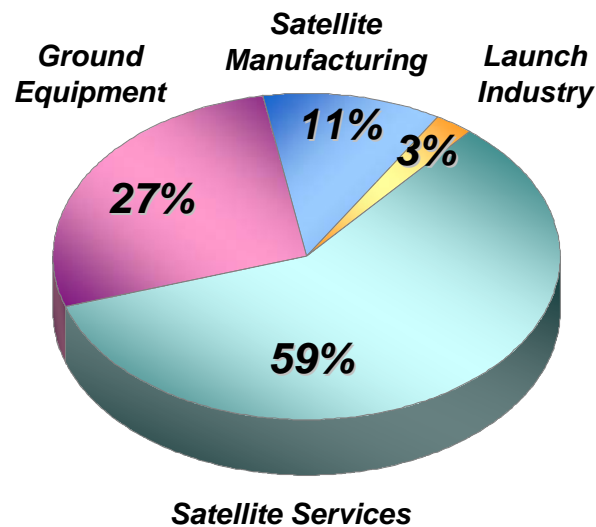
**2003**

**US\$74.3 Billion**



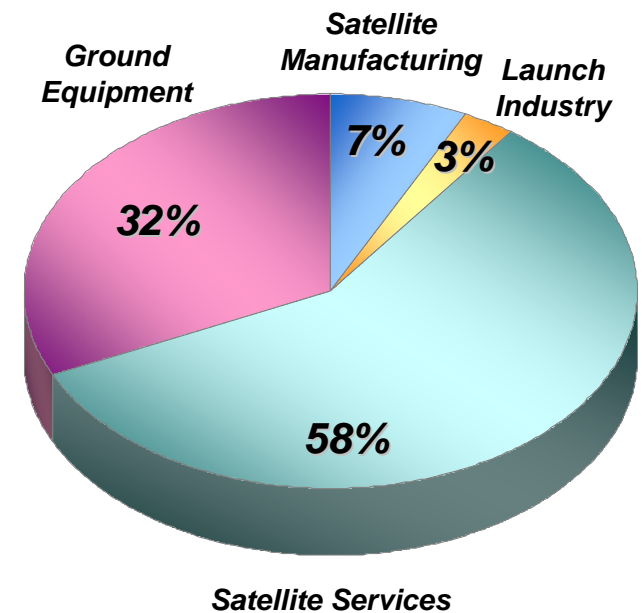
**2006**

**US\$105.5 Billion**



**2008**

**US\$144.4 Billion**

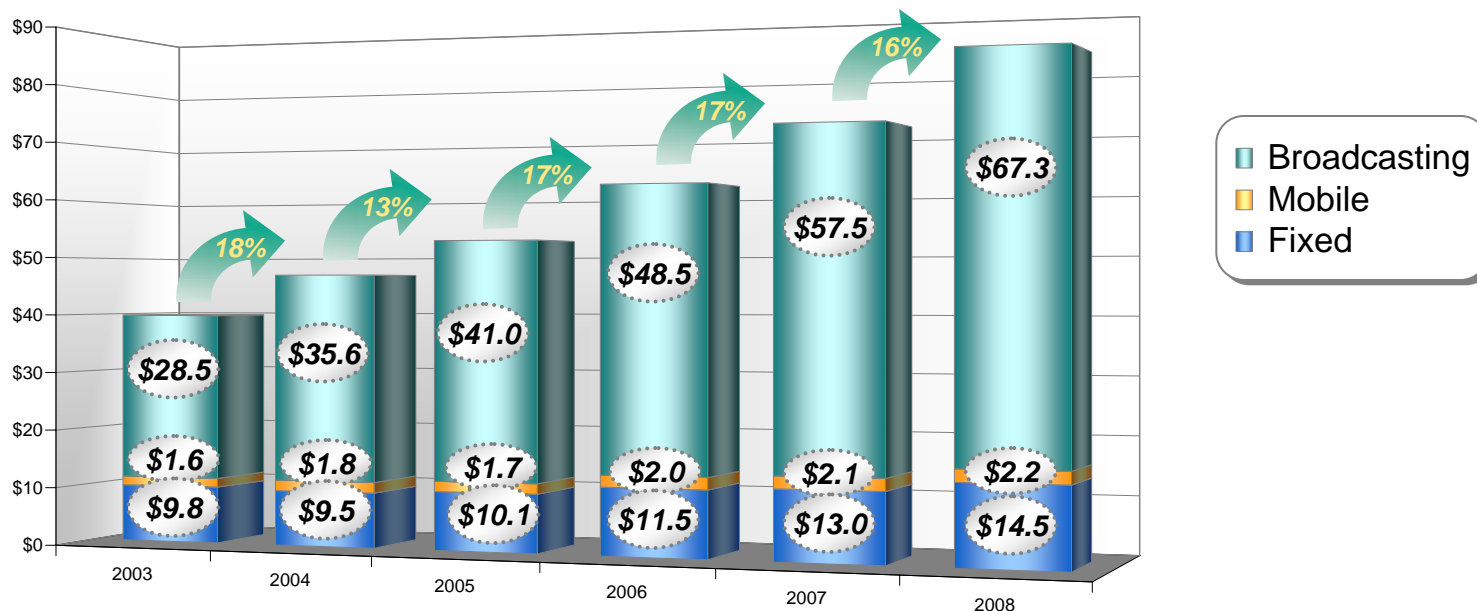


■ Ground Equipment
 ■ Launch Industry
 ■ Satellite Manufacturing
 ■ Satellite Services



# World Satellite Services Revenue

Revenue (in Billions US\$)



|   | 2003          | 2004          | 2005          | 2006          | 2007          | 2008          |
|---|---------------|---------------|---------------|---------------|---------------|---------------|
| <b>Broadcasting</b>                     | <b>\$28.5</b> | <b>\$35.6</b> | <b>\$41.0</b> | <b>\$48.5</b> | <b>\$57.5</b> | <b>\$67.3</b> |
| - Satellite TV (DBS/DTH)                | \$28.4        | \$35.3        | \$40.2        | \$46.9        | \$55.4        | \$64.9        |
| - Satellite Radio (DARS)                | \$0.1         | \$0.3         | \$0.8         | \$1.6         | \$2.1         | \$2.5         |
| <b>Mobile<sup>1</sup></b>               | <b>\$1.6</b>  | <b>\$1.8</b>  | <b>\$1.7</b>  | <b>\$2.0</b>  | <b>\$2.1</b>  | <b>\$2.2</b>  |
| <b>Fixed</b>                            | <b>\$9.8</b>  | <b>\$9.5</b>  | <b>\$10.1</b> | <b>\$11.5</b> | <b>\$13.0</b> | <b>\$14.5</b> |
| - Transponder Agreements                | \$7.4         | \$7.0         | \$7.3         | \$8.5         | \$9.6         | \$10.2        |
| - Managed Network Services <sup>2</sup> | \$1.7         | \$1.9         | \$2.0         | \$2.2         | \$2.6         | \$2.8         |
| - End-User Broadband                    | \$0.3         | \$0.2         | \$0.3         | \$0.3         | \$0.4         | \$0.8         |
| <b>Remote Sensing</b>                   | <b>\$0.4</b>  | <b>\$0.4</b>  | <b>\$0.5</b>  | <b>\$0.4</b>  | <b>\$0.4</b>  | <b>\$0.7</b>  |
| <b>Total</b>                            | <b>\$39.8</b> | <b>\$46.9</b> | <b>\$52.8</b> | <b>\$62.0</b> | <b>\$72.6</b> | <b>\$84.0</b> |

Note: Numbers may not sum exactly due to rounding

1. Includes mobile satellite telephony and data

2. Includes VSAT services



## Satellite Services Findings

- Satellite Services growth of 16% in 2008 was robust, parallel to the 17% growth in 2007
- Satellite television (DBS/DTH subscription revenues), representing three-quarters of total satellite services revenues in 2008, maintained a steady growth, increasing by 17% to \$64.9 billion
  - Satellite pay TV subscribers grew by more than 30% over 2007 levels, surpassing 130 million globally
  - Satellite pay TV subscribers in the U.S. exceeded 30 million in 2008
- Transponder agreement revenues represent the core of the fixed satellite services sector, and continued to grow, increasing by 6% in 2008
  - Includes contracts for full or partial transponders and occasional use video services

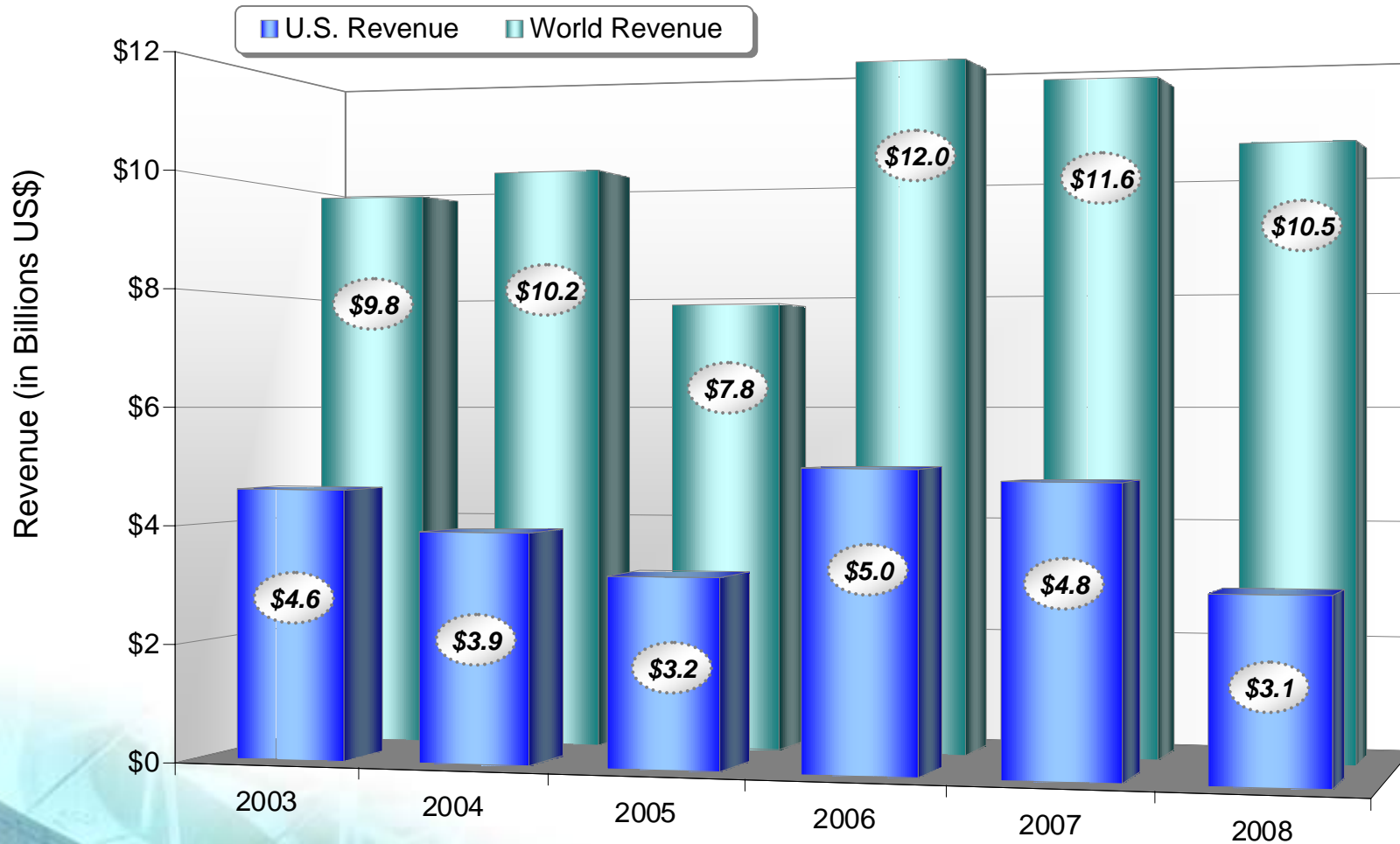


## Satellite Services Findings (2)

- Data applications continued to drive mobile satellite services growth
  - Mobile data services revenues grew by 22%, compared to 14% in 2007, and now represent almost 70% of all mobile satellite services
  - Revenues for mobile telephony declined by 24% in 2008, largely due to the recent decline in Globalstar voice services
  - Satellite broadband revenues doubled, driven by subscriber growth in the U.S.
- Satellite radio (DARS) continued to experience strong growth, although at a lower pace than previously
  - Subscription revenues increased to \$2.45 billion, reflecting an 18% growth versus the 29% growth from 2006 to 2007
  - Subscribers grew by 13% to 20.5 million, roughly half the growth rate of the previous year



# Satellite Manufacturing Revenues



Note: Satellite Manufacturing revenues are recorded in the year the satellite is delivered/launched, not when contract is awarded. World revenue includes U.S. revenue.

## Satellite Manufacturing Findings

- Global Satellite Manufacturing revenues decreased slightly from \$11.6 billion in 2007 to \$10.5 billion in 2008
- Overall revenue decline can be attributed largely to the reduction in number of satellites launched
  - 94 satellites were launched in 2008, versus 102 in 2007
- Meanwhile, U.S. manufacturing revenues declined from \$4.8 billion in 2007 to \$3.1 billion in 2008
- The U.S. share of manufacturing revenues also fell, from 41% of the world total in 2007 to 29% in 2008
  - In 2007, 48 launched satellites were manufactured in the U.S.
  - In 2008, only 21 launched satellites were manufactured in the U.S.



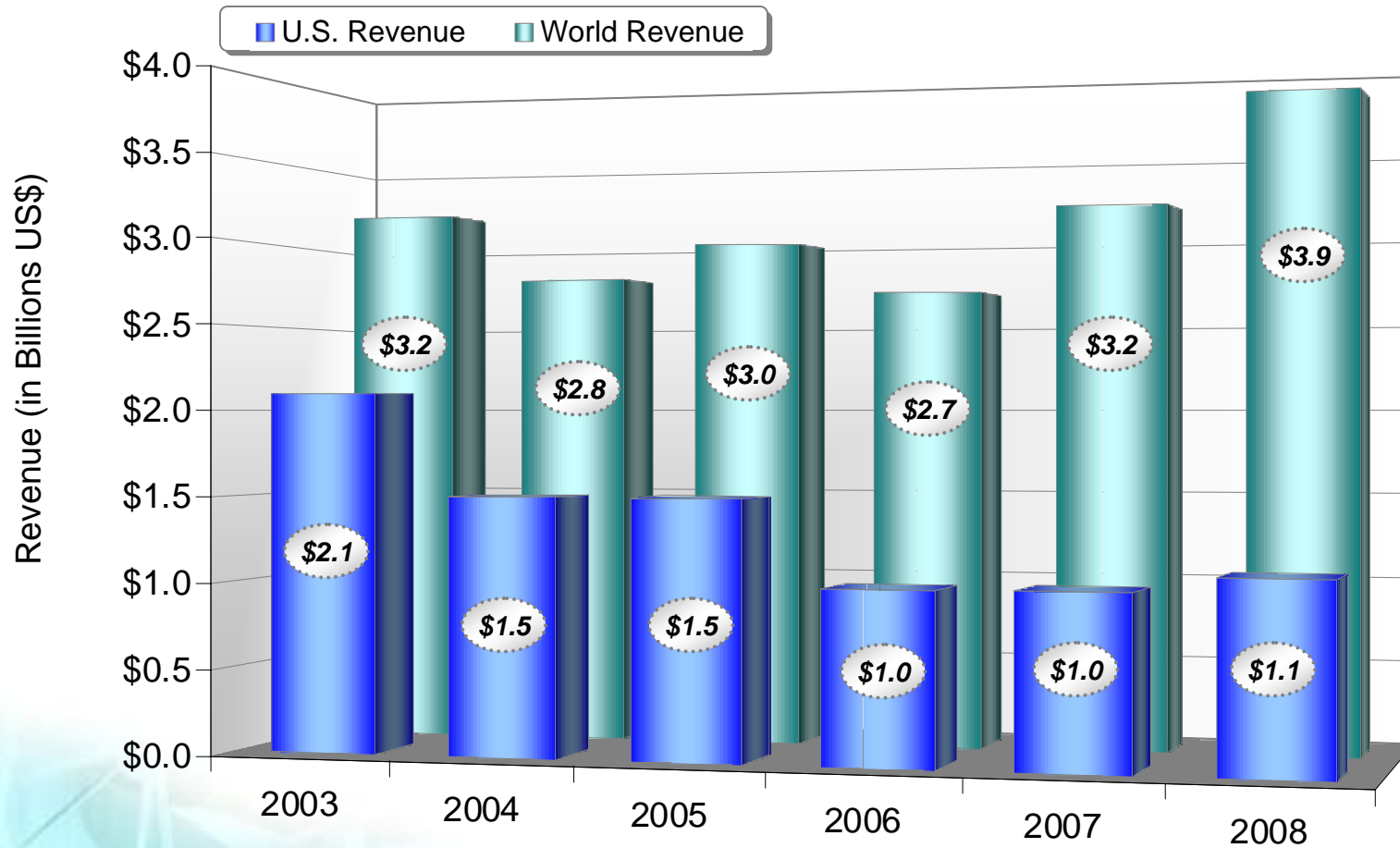


## Satellite Manufacturing Findings (2)

- Global Satellite Manufacturing revenues from commercial customers grew to \$5.2 billion in 2008
  - The proportion of manufacturing revenues from commercial customers (versus government and military customers) rose from about 33% of manufacturing revenues in 2007 to nearly 50% in 2008
- Future commercial spacecraft orders:
  - 21 new commercial geosynchronous orbit (GEO) satellite manufacturing orders were announced in 2008, the same number as in 2007
    - U.S. manufacturers received 52% of these orders, the same proportion as in 2007
    - European manufacturers received 33% of these orders, down from 43% in 2007
    - Russian, Chinese, and Japanese manufacturers each received one order, together constituting 14% of new orders—up from 5% in 2007



# Launch Industry Revenues

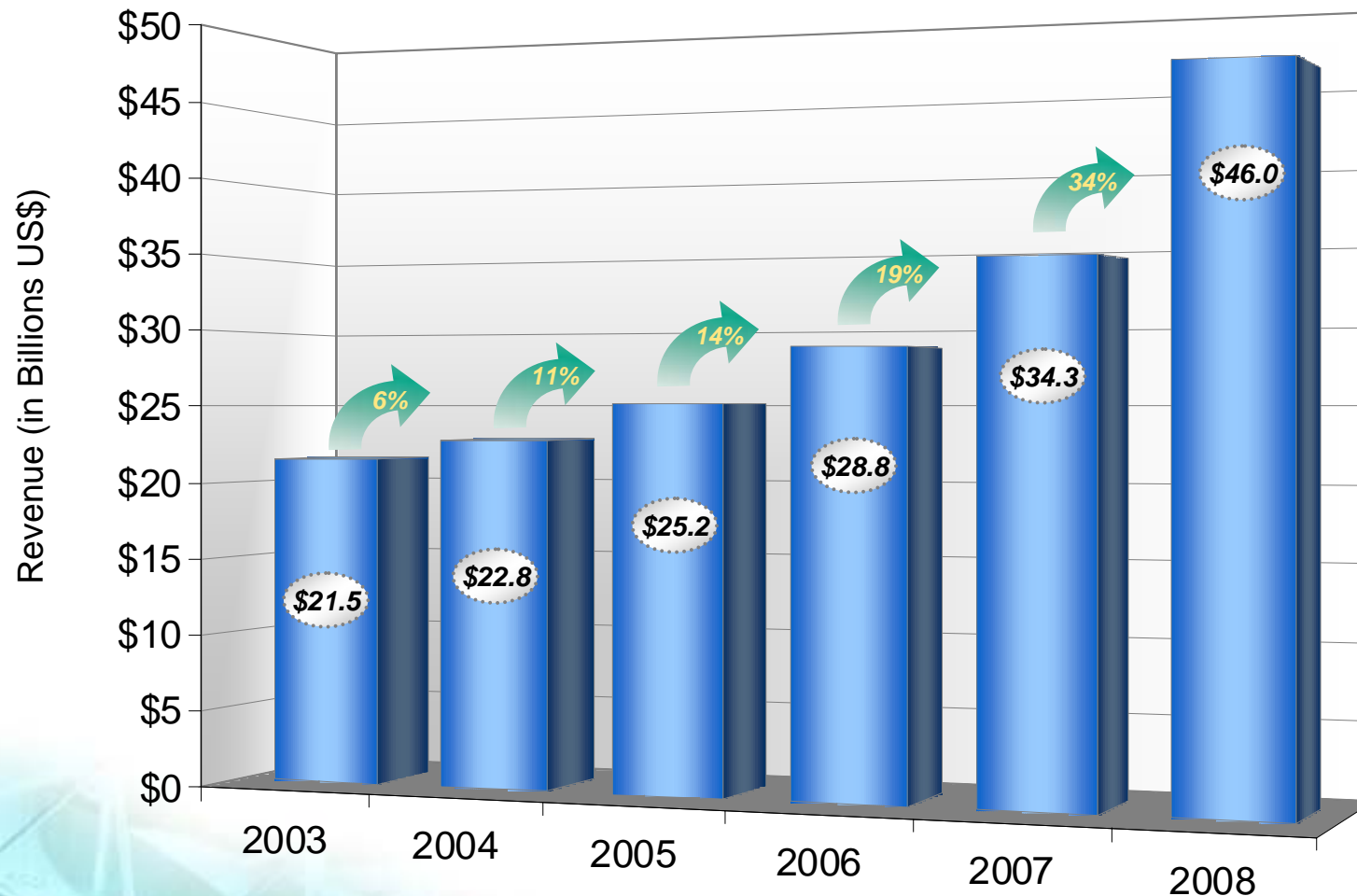


Note: Launch Industry revenues are recorded in the year the launch occurs, not when contract is awarded. World revenue includes U.S. revenue.

## Launch Industry Findings

- Worldwide Launch Industry revenues increased by 20% in 2008, slightly higher than the previous year's growth
  - Revenues were virtually evenly divided between launch procurements by commercial entities and those commercially contracted by governments
- Launch prices rose on average
  - This was reflected both in input provided by survey respondents, as well as widespread industry media reports
  - One factor influencing launch price increases was fluctuating exchange rates of the U.S. dollar versus other currencies
- 37 spacecraft were commercially launched on behalf of government clients, while 41 spacecraft were on behalf of commercial clients
- While global commercial launch revenues rose in 2008, U.S. revenues remained relatively constant at \$1.1 billion
  - Despite stable revenues, the U.S. share of worldwide launch revenues declined from 31% in 2007 to 28% in 2008
- However, future U.S. geosynchronous (GEO) commercial launch orders doubled—from 3 announced orders in 2007 to 6 announced orders in 2008

# World Ground Equipment Revenues



Includes: *Network Equipment* – Gateways, Network Operations Centers (NOCs), Satellite News Gathering (SNG) equipment, flyaway antennas, and Very Small Aperture Terminals (VSATs); and *Consumer Equipment* – Satellite TV and broadband dishes, satellite radios, satellite phones, and select GPS devices

## Ground Equipment Findings

- Overall revenue in the Ground Equipment sector grew by 34% from 2007 to 2008, making it the fastest-growing satellite industry segment
- Ground Equipment is second only to Satellite Services as a proportion of satellite industry revenues, contributing 32% of all revenues in 2008, up from 28% in 2007
- Consumer equipment revenues led growth in this sector
  - Users of consumer-oriented products such as satellite TV and broadband, mobile satellite, and GPS devices drove hardware sales growth
    - GPS device sales accounted for slightly over half of ground equipment revenues
  - New applications and services are driving subscriber churn, which also increases sales of new hardware



## Ground Equipment Findings (2)

- End-user terminal numbers grew across all sectors

| Terminals in Service (Millions) | 2007  | 2008  |
|---------------------------------|-------|-------|
| Satellite TV                    | 100.5 | 133.6 |
| Satellite Radio                 | 18.0  | 20.4  |
| Mobile Satellite Services       | 1.83  | 1.9   |
| Mobile Satellite TV             | 0.95  | 1.3   |
| End-User Broadband              | 0.68  | 1.0   |

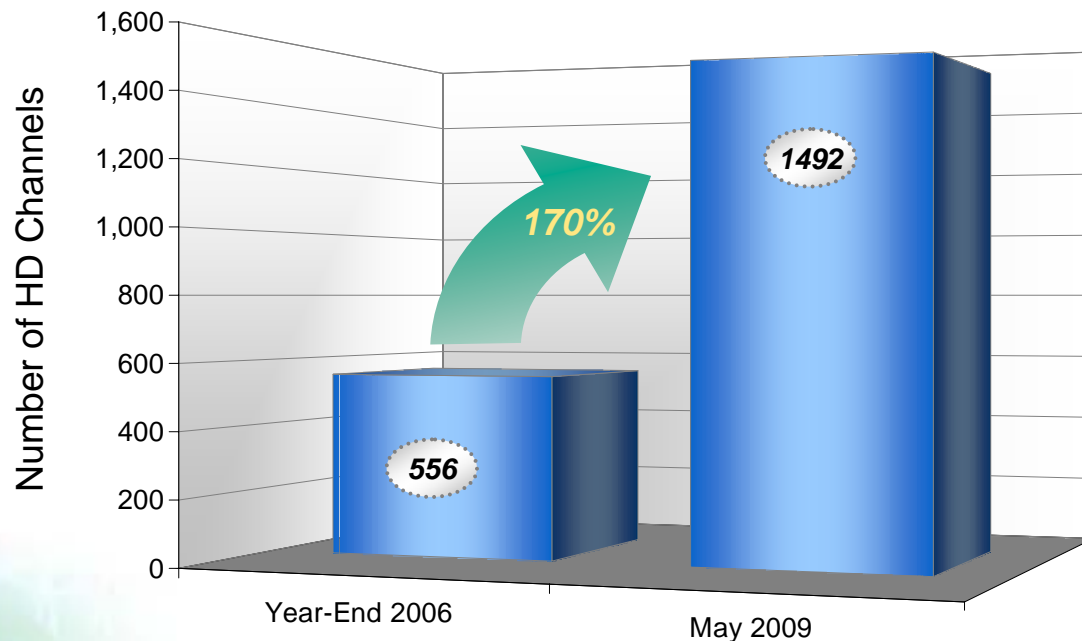
Note: For consumer services, terminal number estimates are based on reported subscriber numbers

- Growth of end-user broadband between 2007 and 2008 occurred primarily in the U.S.
  - U.S. satellite broadband subscribers grew from approximately 622,000 in 2007 to approximately 842,000 in 2008
- Mobile satellite TV is currently offered mainly in Asia, although service is starting in the U.S. and Europe



## Global Satellite Carriage of HDTV

- Growth in satellite carriage of High Definition Television (HDTV) continued to drive both transponder and DTH service revenues
  - The number of HDTV channels worldwide grew by almost 170% over 2.5 years (between the end of 2006 and May 2009)
  - More than 60% of HDTV channels currently serve North American market
  - Remaining HDTV channels primarily serve European and Asia-Pacific markets





# U.S. Satellite Industry Employment

- The U.S. satellite industry added over 2,000 jobs between 2006 and 2007, led by satellite services employment growth of 21%

| Satellite Industry Sector        | Estimated U.S. Personnel (2006) * | Estimated U.S. Personnel (2007) * |
|----------------------------------|-----------------------------------|-----------------------------------|
| Satellite Services               | 69,377                            | 83,993                            |
| Satellite Manufacturing          | 32,368                            | 26,724                            |
| Launch Industry                  | 51,262                            | 50,670                            |
| Ground Equipment                 | 102,367                           | 96,190                            |
| Total Estimated U.S. Employees * | 255,374                           | 257,577                           |

\* Includes launch tracking and telemetry services

Source: U.S. Bureau of Labor Statistics (BLS). All figures 2007 — the most recent complete data as of May 2009

Figures derived from three inputs: BLS Current Employment Statistics Survey (CES); BLS Quarterly Census of Employment and Wages (QCEW); U.S. Census Bureau North American Industry Classification System (NAICS)

Note: The apportionment of 2007 U.S. satellite industry employment statistics among the four satellite industry segments varies from the 2006 employment statistics reported in last year's satellite industry indicators. This is the result of re-centering due to the following changes:

- 1) The BLS revised slightly revised its year-end 2006 numbers retroactively once year-end 2007 numbers were tabulated.
- 2) One North American Industry Classification System (NAICS) code was no longer updated between 2007 and 2008, resulting in a change in the calculation of ground equipment sector employment.
- 3) The overall allocation of employment figures among the four satellite industry sectors was re-calculated based on updated assumptions developed for the 2007 employment metrics in consultation with the U.S. BLS.



## 2009 Trend Summary

- Overall satellite industry growth of 19% indicates fundamental robustness
- Relative industry composition demonstrates the increasing weight of the Satellite Services and Ground Equipment segments
  - These two segments combined constituted 86% of satellite industry revenues in 2006, but have now grown to 90%
- Consumer services, both satellite TV and satellite radio, continue to lead overall Satellite Services growth and fuel revenue growth in the Ground Equipment segment
- Launch price increases, rather than more launches, fueled an increase in Launch Industry sector revenues between 2007 and 2008
  - Despite fairly constant revenues, U.S. share of world launch revenues decreased from 31% in 2007 to 28% in 2008
- Lower Satellite Manufacturing revenues reflect fewer spacecraft launched in 2008 versus 2007
  - The U.S. share of manufacturing revenues fell from 41% in 2007 to 29% in 2008

- Some industry-wide trends continued
  - Commercial satellite operators continued to replace and realign their fleets
  - Robust global appetite continued for consumer satellite applications, mobility and convergence
  - Carriage of HDTV continued to reach critical mass in major markets globally
- Full impact of economic downturn on satellite industry not yet reflected
  - Economic downturns have historically had a delayed impact on the satellite industry, but growing interdependence among all four sectors may serve to shorten negative business cycles

